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TEACHER EDUCATION--AN URGENT MATTER. A REPORT TO THE COMMISSION FOR HIGHER EDUCATION, STATE OF CONNECTICUT.
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ACADEMY FOR EDUCATIONAL DEVELOPMENT INC., NEW YORK

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ON THE BASIS OF A 10- TO 15-YEAR PROJECTION OF THE NEED FOR TEACHERS IN CONNECTICUT, A CONSULTANT PANEL RECOMMENDED THAT THE COMMISSION FOR HIGHER EDUCATION WORK TO (1) PROVIDE ALL NEW TEACHERS NEEDED RATHER THAN THE TWO-THIRDS PRESENTLY SUPPLIED, (2) INCREASE THE POOL OF PROSPECTIVE TEACHERS BY ADMITTING ALL QUALIFIED HIGH SCHOOL GRADUATES WHO APPLY TO PUBLIC INSTITUTIONS OF HIGHER LEARNING, (3) GIVE FIRM STATEWIDE DIRECTION AND FINANCIAL SUPPORT FOR PRE- AND IN-SERVICE TRAINING, (4) ESTABLISH A STATE COUNCIL FOR RESEARCH AND EXPERIMENTATION IN TEACHER EDUCATION TO ENCOURAGE AND FINANCIALLY SUPPORT INNOVATIONS IN EDUCATION, (5) STUDY OTHER WAYS TO ENCOURAGE AND ASSIST PRIVATE INSTITUTIONS WHICH PROVIDE PUBLIC SCHOOL TEACHERS, (6) DELEGATE DIFFERENT AND PARTICULAR PROGRAMS TO THE STATE UNIVERSITY, THE STATE COLLEGES, AND THE COMMUNITY COLLEGES, (7) MODIFY TEACHER CERTIFICATION BY ESTABLISHING STATEWIDE CRITERIA, ADMINISTERED BY TEACHERS, AND AWARD A PERMANENT CERTIFICATE AT THE SATISFACTORY COMPLETION OF 3 YEARS OF TEACHING SUPERVISED BY "CLINICAL TEACHERS," (8) TRAIN "CLINICAL TEACHERS" AT STATE-FINANCED WORKSHOPS AND PROVIDE ADDITIONAL COLLEGE AND UNIVERSITY PERSONNEL TO INSTRUCT THEM, (9) PROVIDE FACILITIES AND ESTABLISH TUITION RATES FOR GRADUATE TEACHER EDUCATION EQUAL TO THOSE FOR UNDERGRADUATE PROGRAMS, (10) INCREASE SCHOLARSHIP AID TO BOTH UNDERGRADUATE AND GRADUATE TEACHER EDUCATION STUDENTS, AND (11) EXPAND SPECIAL EDUCATION PROGRAMS. (RP)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TEACHER EDUCATION - AN URGENT MATTER

A Report to
The Commission for Higher Education
State of Connecticut

October, 1966

Prepared by
The Academy for Educational Development, Inc.

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Each consultant was asked to make field visits to two or more of the seventeen Connecticut institutions of higher education maintaining approved programs in teacher education -- including the public, private and church-related institutions of higher education. The consultants to the Panel, therefore, are not responsible for the recommendations of the Panel.

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October 31, 1966

Mr. Donald McGannon, Chairman
Commission for Higher Education
Box 1320
Hartford, Connecticut 06115

Dear Mr. McGannon:

In November of 1965 initial discussions were held between representatives of the Commission for Higher Education and of the Academy for Educational Development with respect to a study of teacher education in Connecticut. Under a contract with the Commission dated March 15, 1966, the Academy agreed to undertake such a study and report its findings and recommendations by October 31, 1966. As the Academy's Consultant Panel for this study, we present this report of our findings and recommendations.

The Panel, in preparing this report, has kept in mind that the Commission is expected to report on teacher education to the 1967 General Assembly. We believe that our findings and recommendations, if used as the basis for future policies and actions respecting teacher education, will strengthen this vital area of higher education in Connecticut and contribute greatly to the improvement of education at all levels in Connecticut.

The Consultant Panel recognizes that the Commission, in such actions as it may take on the recommendations in this report, will continue to rely heavily on effective working relationships with other agencies of state and Federal government, some of which also have responsibilities and authority with respect to teacher education. Although the recommendations are addressed to the Commission in each case, their implementation necessarily will concern such agencies, whose rightful interest in them is recognized and intended to be honored by this Report.

Our conviction that changes in teacher education are necessary is strongly supported by our contacts with many persons and institutions in Connecticut during this study. Our confidence that these changes are feasible is based on Connecticut's historical commitment to excellence in education, its demonstrated readiness to take such public and private actions as best support that commitment and on the evidence that Connecticut's citizens, educators, and civic leaders are anxious to improve teacher education in the state.

There is no adequate way for the Panel to acknowledge personally the invaluable and gracious help we received from many individuals, institutions and organizations, both in Connecticut and outside the State. The college and university faculties and administrators have given generously of their time and ideas, as have the State's public and private school staffs. The organized professional groups have shared their thinking and experience with us without reservation. The various public agencies, boards and departments of the State have been a source of critically needed information and, more important, have been constant examples to the Panel of the high quality of public service and concern Connecticut enjoys. The people of Connecticut, legislative leaders, business men, and representatives of many organizations have made significant contributions. For this massive assistance and unfailing cooperation, we publicly express our appreciation and our thanks

The results of our study are presented in this report, to which is attached a number of volumes of supporting data, exhibits and consultant reports. Although the presentation of this report completes the Panel's assignment, responsibility to improve and strengthen Connecticut teacher education is one for the people of Connecticut to honor. Should the Panel's report contribute to that end, our confidence in Connecticut's people and their expressed hopes for this study will have been justified.

Sincerely,

Samuel M. Brownell
Robert N. Bush
Paul A. Woodring
Lester W. Nelson (Director)
Alvin C. Eurich (Chairman)

SECTION A

INTRODUCTION

Connecticut's 1963 General Assembly, through Special Act No. 183 (as amended by Special Act No. 391) provided for gubernatorial appointment of a Study Commission on Higher Education not later than August 1, 1963. This act directed the Commission to "make a study in depth of the various aspects, programs, structures and needs of higher education in Connecticut" and it was further directed to "make an inventory of existing facilities, both public and private, an analysis of the numbers of students served in each major area of education, both academic and professional, and an evaluation study of teacher training programs, and shall make recommendations as to areas which need expanding and improving in accordance with industrial, intellectual and social needs."

The Study Commission on Higher Education devoted eighteen months to intensive studies of higher education in Connecticut, assisted by a group of consultants from the Office of Education, U. S. Department of Health, Education and Welfare, and presented its Report to the Governor and the General Assembly in February, 1965. This report recommended "that a statewide system of public higher education be constituted as a public trust and that it be governed by a Commission for Higher Education having full powers of organization." It was further recommended that "the Commission for Higher Education have sole responsibility and authority for the planning and organization of Connecticut's public-supported program of higher education" and presented a broad outline of proposed areas of responsibilities and authority to be vested in the Commission. Among the recommended areas of authority proposed for the Commission was "to authorize all academic degrees and degree programs, including those leading to certification for public school teaching."

The 1965 General Assembly, through Public Act No. 330, established a Commission for Higher Education, vesting broad powers over a state system of higher education in that Commission. Three sections of this act had direct and specific relevance to the area of teacher education, as noted below:

Section 12, Public Act No. 330

> "The Commission for Higher Education may issue a certificate certifying that the person to whom the same is issued has had the post-secondary education required by any provision of the general statutes or by any regulation of any board for admission to an examination to practice any profession for which evidence of education is required by the provisions of the general statutes. The provisions of this section shall not apply to certification of teachers for the public schools."

Section 20, Public Act No. 330

> "If the Commission for Higher Education determines that no approved program of teacher education within the state is available for the preparation of teachers of aphasic children

> or of deaf children, said Commission may provide scholarship aid for such students as it may designate to attend approved programs in institutions in other states. Said Commission may determine the amount of such scholarship aid in each case, but the total amount of aid available in any one year shall not exceed six thousand dollars. In order to be eligible for such scholarship aid any applicant shall agree to teach aphasic or deaf children in Connecticut for at least three years."

Section 39, Public Act No. 330

> "The Commission for Higher Education shall study and evaluate the teacher training programs at institutions under its jurisdiction and shall make a report of its findings to the 1967 session of the General Assembly."

On March 15, 1966, the Commission for Higher Education engaged the Academy for Educational Development to make a study and evaluation of teacher education in Connecticut and to report its findings and recommendations to the Commission for Higher Education not later than October 31, 1966. Under this contract the Academy for Educational Development agreed to concentrate its major study activities in five broad areas, as follows:

1. To review and comment upon existing programs of teacher education offered by the seventeen public and private institutions of higher education in Connecticut offering approved programs of teacher education.

2. To develop recommendations with respect to essential elements for optimum programs of teacher education (including clinical experience and innovative practices) for the preparation of teachers for the public elementary and secondary schools in Connecticut.

3. To project the needs of Connecticut's public schools for teachers at both elementary and secondary school levels for the next ten to fifteen years.

4. To develop recommendations with respect to the state's organizational structure deemed necessary to plan and coordinate the offering of appropriate programs for the preparation of teachers for the public elementary and secondary schools of the state.

5. To develop recommendations concerning the criteria to be used for evaluating programs of teacher education offered in the public and private institutions of higher education in Connecticut.

The Connecticut Teacher Education Study has been devoted to an examination of each of the five areas of inquiry stated above and this *Report of the Connecticut Teacher Education Study* embodies the findings and recommendations of the Consultant Panel established by the Academy for Educational Development, based on the results of these inquiries.

It is pertinent to point out that the Study has not purported -- nor was it intended -- to be an exhaustive inquiry into all facets of institutional operations and that, in this respect, it is not a typical survey. Matters of teacher education program substance, criteria for program evaluation, public policies with respect to programs of teacher education, projection of future needs for teachers, and matters of relevant organizational structure affecting teacher education have been its primary concerns. It has not undertaken to examine in detail such matters as plant and physical facilities, budget making, budget control, and other such areas which, though important, were not central to Study purposes.

The Consultant Panel has not attempted any detail evaluation of present teacher education programs on the basis of a comparison with such programs in other states. The Panel is confident, however, that any such comparison at a national level would place Connecticut high among the fifty states.

This report has not sought primarily to emphasize the many strengths in Connecticut's teacher education programs which already exist but, rather, to formulate recommendations for future action which build on those strengths and which, if adopted, would provide strong support of the state's continuing commitment to the highest possible quality in education at all levels.

SECTION B

TEACHER EDUCATION - AN URGENT MATTER

Connecticut has recognized the education of teachers to be a matter of proper public concern for well over 100 years. Early leadership in this field was taken by the Connecticut General Assembly when, in 1848, largely influenced by Henry Barnard, the New Britain Normal School (now the Central Connecticut State College) was established as the first of the state's public institutions of higher education.

Following the founding of the New Britain Normal School, three other public institutions of higher education were established for the primary purpose of preparing teachers for the public schools. Until 1961 this remained their sole function. In that year the four State Colleges were authorized by law also to offer four-year liberal arts programs leading to the Bachelor of Arts degree.

The state's interest in teacher education has been demonstrated in many other ways, in addition to establishing public colleges for the education of teachers. Certification of teachers and other school personnel for employment in the public schools, the diversification of teacher education programs, the setting of standards for approval of programs, and other actions taken over the past 118 years attest to the persistence of this interest. Current concern about teacher education, therefore, is not new in Connecticut. It represents a long and honorable tradition of public determination to maintain and to improve programs for the preparation of teachers.

The continuing interest of the state in teacher education is manifest in several recent actions of the General Assembly. Among these actions have been:

- adoption of Special Act No. 183 by the 1963 General Assembly, creating the Study Commission on Higher Education and directing the Commission ". . . to make . . . an evaluation study of teacher training programs . . .";
- enactment of Public Act No. 330 by the 1965 General Assembly, establishing a statewide system of higher education and creating the Commission for Higher Education, specifically charged with state responsibilities in the field of teacher education; and
- creation of the Board of Trustees of the State Colleges.

Concerns about teacher education have been reflected too, in the actions and recommendations of professional associations and quasi-public groups -- the Commission on Teacher Education and Professional Standards (TEPS), the Connecticut Education Association, the State Council on Teacher Education, and the public and private institutions of higher education engaged in preparing teachers.

There are a number of reasons for present concerns about teacher education in Connecticut. Of these the following appear to be of major importance:

* the growing shortage of fully qualified teachers -- particularly in areas of special education and special services and in specific subject matter areas -- to staff the elementary and secondary schools of the state;

* the increasing numbers of elementary and secondary school-age children to be taught;

* the current national consideration being given to the possible extension downward of organized public education into the preschool years;

* the demands made on teachers by the increase in knowledge and the increasing availability of new types of instructional materials;

* the growing geographic, social, and economic mobility of families;

* the rising educational aspirations for their children of increasing proportions of American families;

* changes in the national economy reflected, in part, by the continuing movement toward an economy oriented to service-type kinds of work -- a movement which accentuates the need for more education and higher levels of education and training;

* the growing national determination to achieve more fully the American commitment to equality of educational opportunity for all individuals;

* the impact of modern educational technology on methods of instruction, the diversity of instructional materials, and the means for recording, storing, retrieving, distributing, and using these materials; and

* the realization that Connecticut, despite its present favorable competitive position in attracting teachers prepared elsewhere than instate, may not continue to enjoy this advantage indefinitely and may have to prepare a greater proportion of its needed teachers in its own institutions of higher education.

To these reasons must be added another, and different, cause for concerns about teacher education. The Panel observes that substantial numbers of those whose views were sought during the course of this study, as well as many of those who voluntarily offered their views, feel strongly that now is the time to make significant changes in teacher education. The time to change is when the mood for change is clear and when other significant developments in higher education are taking place. The Panel shares this view, since teacher education, as a part of higher education, inevitably will be affected by developments in higher education as a whole.

Urgency alone, however, is not a sound support for adopting emergency measures. The critical needs of teacher education are unlikely to be met through emergency actions -- quite the contrary. For these reasons the Panel states the principles which have guided this study and which undergird the recommendations appearing in the following sections of this report.

These principles are:

1. The improvement of elementary and secondary education is inseparably linked with the improvement of teacher education. The two constitute a whole whose integrity must be recognized and honored.

2. The basic responsibility of the state for elementary and secondary education includes comparable responsibility for teacher education.

3. Responsibility for the preservice and inservice preparation of teachers and other school personnel rests on both the public and private institutions of higher education of the state and the public schools of the state which employ teachers -- this must be true of public policy and in fact.

4. The state is responsible for adopting and pursuing such policies and providing such support as may be necessary to insure to the schools of the state an adequate supply of liberally educated and professionally competent teachers and other school personnel to meet the needs of the schools and of the students attending those schools.

5. As the character and range of needs for teachers and other school personnel change in accord with social, cultural, economic, and demographic changes in society, programs of teacher education must reflect these changes.

6. The policies and practices of institutions of higher education which prepare teachers, and of the public schools which employ teachers, must respond to and support these changes in program.

7. The state must also be committed to a sustained program of support for research, experimentation, and evaluation in teacher education -- research to point the direction and provide a valid base for change; evaluation to assess the results achieved through the changes made.

8. The allocation of public authority over all matters pertaining to teacher education must be clear -- both to the public and private institutions of higher education and to the schools and to such public boards, commissions, departments, or other agencies as are vested with such authority.

The following sections of this report contain a series of recommendations -- with accompanying comments -- which the Panel believes should be incorporated into the future plans, policies, and actions of the state with respect to teacher education.

SECTION C

TEACHER EDUCATION AND PUBLIC POLICY

The success of future efforts to improve teacher education in Connecticut rests primarily on three factors:

1. the validity, strength, and clarity of public policies affecting teacher education;
2. the quality of leadership and the adequacy of resources available to the public and private institutions of higher education and to the schools which together prepare teachers and other school personnel; and
3. the extent to which efforts to improve teacher education give first priority to what is best for the learner.

The importance of public policy was identified in the Report of a Survey of Higher Education in Connecticut, prepared for the Study Commission on Higher Education by staff members of the United States Office of Education. That report said (Vol. I, p. 97):

> "Actually, the focal issue in teacher education in Connecticut is whether the State authority will assume self-initiated leadership in the solution of broad problems affecting teacher education, or whether it will restrict its own potential for real leadership by directing efforts primarily to providing teachers not supplied by private institutions and out-of-State sources.

> The choice is a matter of policy. The way in which State authority acts concerning the problems of teacher education constitutes a policy concerning its responsibility for leadership, whether such a policy has been formulated and expressed or not. . . ."

The Study Commission on Higher Education also recognized the crucial role of public policy in its Report to the Governor and the General Assembly (February 1965).

The strongest evidence of public awareness of the crucial role of public policy was provided by the General Assembly during both the 1963 and the 1965 legislative sessions. Prime illustrations of this were the adoption of Special Act No. 183 (amended by Special Act No. 391) by the 1963 General Assembly, establishing the Study Commission on Higher Education, and the enactment of Public Act No. 330 by the 1965 General Assembly, establishing the Commission for Higher Education with broad powers over a statewide system of higher education.

In addition to the above matters of public record, the Panel notes that the relationship of public policy to teacher education frequently has been mentioned as an area requiring clarification during the many interviews and discussions held with individuals and groups in Connecticut during this study.

In the light of such broad public recognition in Connecticut of the basic importance of public policy, further documentation seems unnecessary. The specific areas of need to which public policy should be addressed must be identified and the actions most appropriate to meeting these needs must be determined. The remainder of this section of the report is devoted to five recommendations concerning matters of public policy.

RECOMMENDATION NO. 1 The Commission for Higher Education should declare that the policy of Connecticut is to provide, through state support of the public institutions of higher education and of the public schools, and through active encouragement to the private institutions of higher education, enough newly prepared teachers and other school personnel to meet the needs of the public elementary and secondary schools of the state.

The most important single factor determining the relationship between the state's need for teachers and the supply of teachers is the new beginning teacher. The following facts are germane to any consideration of this relationship in Connecticut.

1. Connecticut's public and private colleges and universities are now providing only approximately two-thirds of Connecticut's new beginning public elementary and secondary teachers.

2. In recent years -- since 1960 -- Connecticut's public higher education institutions have provided approximately half and the private colleges and universities have provided another sixth of all new beginning teachers.

3. Of the beginning teachers prepared in Connecticut, the public institutions are providing slightly more than three-fourths of the elementary teachers and about three-fifths of the secondary teachers; the private colleges and universities are providing one-fourth and two-fifths respectively.

From these facts it is clear that Connecticut has relied heavily on out-of-state sources of preparation for its new beginning teachers. One of every three new beginning teachers employed by the public elementary and secondary schools is prepared by institutions outside of Connecticut.

Two additional facts concerning teacher supply in Connecticut are relevant. First, an annually increasing percentage of the state's newly appointed teachers are inexperienced teachers. Second, the percentage of all full-time teachers lacking full certification, employed in the public schools, has also been increasing in recent years. It rose from 6.7 per cent in 1958 to 7.5 per cent in 1963 and is slightly above this figure today. Obviously there has been a persistent heavy reliance on out-of-state sources and on "emergency" certificates for personnel to staff the public schools of the state.

The Panel recognizes that pressure is great to have a partially prepared teacher in the classroom rather than one with no preparation or to have no teacher at all. It cannot agree that either situation is desirable or, indeed, necessary. Unfortunately, under present public policy in Connecticut, the state is not preparing an adequate supply of teachers for its schools and, in order to staff its schools, employs substantial numbers of teachers prepared elsewhere and substantial numbers of teachers with only partial preparation.

The heavy reliance on out-of-state and "emergency" personnel does not mean that teachers prepared out-of-state are better prepared than those prepared in the state, nor does it mean that persons employed under emergency provisions do not, in time, become fully qualified and effective teachers. The Panel does not advocate nor would it support public policy and procedures which discriminate against fully qualified teachers prepared out-of-state who desire to teach in Connecticut. Neither does the Panel suggest that there should be one, and only one, method or procedure by which persons desiring to enter teaching may be prepared. Alternative methods are desirable (the Intensive Program for College Graduates, for example). Teacher mobility and alternative options of preparation for those desiring to teach are major safeguards against discrimination, provincialism, and professional "in-breeding."

Connecticut should not embrace, nor accept through lack of clear public policy, a growing dependence on sources of teachers and other school personnel which lie outside the ability of the state to control or, at least, substantially to affect. Neither should it perpetuate practices which permit the employment of persons to teach its children who are not fully qualified to do so. The first course places schools at the mercy of forces beyond their capacity to control or to affect materially; the second places children at the mercy of those who are not fully qualfied to teach. Neither course can be justified. Equity and prudence require that as soon as possible the state should prepare sufficient numbers of teachers to meet its needs and reliance on emergency credentials should be stopped.

The Panel believes the necessary and most important first step to be taken is that contained in its Recommendation No. 1.

RECOMMENDATION NO. 2 The Commission for Higher Education should seek to establish for the state a policy of admission to all public, tax-supported institutions of higher education, for all resident secondary school graduates who meet the specified qualifications for admission to the respective institutions.

Arbitrary limitations or quotas on admissions of qualified resident secondary school graduates, whether dictated by deliberate public policy or by reason of limited numbers of available "places" in the public institutions, not only sets an undesirable ceiling on opportunities for post-secondary education, but also limits the state's ability to prepare enough teachers for its schools.

In all public institutions of higher education in Connecticut, the beginning of "professional preparation" for teaching is made in the third (junior) undergraduate year. Criteria for the selection of persons admitted to teacher education professional programs should be applied at this point and the criteria should be both relevant and selective. Limitations on the admission of secondary school graduates who are qualified to enter as freshmen and who, during the first two years, will pursue a program of general education, automatically tends to limit the pool of those from which admissions to programs of professional preparation must come. An enrollment policy which admits to college all resident qualified freshman applicants, is in the interest of the state in enlarging its supply of new, beginning teachers.

Truly wise public policy will not embrace, either directly or indirectly, restrictive quotas in public education. To do so violates the commitment to equal opportunity for education which rests firmly on freedom of individual choice. While freedom of choice is governed partly by the individual's qualifications to support that choice, the state's policy should be to honor freedom of choice and to support it as broadly as possible.

The admission policy here recommended for the public institutions of higher education in Connecticut represents no relaxation but, rather, a strengthening of requirements for admission to professional preparation of those desiring to teach. The intellectual and emotional qualifications essential for teachers, as well as individual commitment to teaching, can be far better assessed during and at the end of the first two years of undergraduate work than at the time of graduation from secondary school.

RECOMMENDATION NO. 3 The Commission for Higher Education should establish and implement, through appropriate channels and agencies, policies which place direct responsibilities on the state's public schools to become active partners with the public and private institutions of higher education in the preservice and the inservice education of teachers and other school personnel.

The effective preparation of teachers demands that the schools participate responsibly in the clinical part of preservice and inservice professional preparation. Neither the colleges nor the schools alone can provide this part of preparation. Not only must the schools be active and responsible participants in the clinical preparation of teachers but the resources to support this involvement must be provided (see Section F and the accompanying recommendations). This part of teacher preparation is too crucial for the state to allow school participation to be on a purely permissive and locally-determined basis, with sporadic and meager financial support.

Nothing less than a clear, definitive public policy will suffice to accomplish the necessary extent and quality of school involvement in teacher education. More specific recommendations, designed to implement the policy here recommended, will be found in Section F.

RECOMMENDATION NO. 4 The Commission for Higher Education should declare, as a fundamental policy commitment, its active encouragement and assistance to the institutions of higher education and to the schools of the state in the pursuit of vigorous programs of research, experimentation, and innovation in teacher education, both on their own campuses and in association with other schools, institutions, and agencies.

Strong and continuous programs of research and experimentation are essential for the development of sound public policy, for improvement of programs, and for validation of proposed changes -- in education no less than in other areas of human activity. The direct relationship between education and the individual, as well as the state's investment in education, adds emphasis to the importance of research and experimentation.

The Panel believes strongly that this recommendation belongs with the other recommendations dealing with public policy. More detailed treatment of the matter will be found in Section K.

RECOMMENDATION NO. 5 The Commission for Higher Education should adopt and follow policies designed to encourage Connecticut's private, non-tax-supported institutions of higher education to maintain and develop programs for the preparation of teachers and other school personnel which are appropriate for these institutions and, in support of such policies, to provide the advice and assistance legally permissible.

The private institutions of higher education in Connecticut have served the state and the nation with distinction. The quality of their faculties, their contributions to man's knowledge, their services to the state and to all levels of public and private endeavor rank them high among Connecticut's most important assets. The substantial role of the private institutions in providing teachers for Connecticut's schools, and their potential for continuing to do so, place a responsibility on the state to give these institutions every possible and appropriate encouragement and assistance.

The Panel suggests that the interest of the state, in assuring an adequate supply of qualified competent teachers for its schools, would be well served if the Commission for Higher Education were to initiate active and sustained exploration of ways and means through which the private colleges and universities could play an even greater role in the education of teachers and other school personnel. The need for individuals of talent and high skill at all levels of education is so great and so critical that no possible source of personnel for the state's educational enterprise can safely be neglected.

SECTION D

TEACHER EDUCATION - PUBLIC CONTROLS

The recommendations on public policy in the preceding section of this report are essential. It is imperative that the controls through which public policies are administered be equally clear. This is not now the case.

Five major state agencies exist, each having authority over various matters affecting teacher education, the institutions of higher education, and the schools which must be involved in the preparation of teachers. These agencies are:

The Commission for Higher Education
The Board of Trustees of State Colleges
The Board of Trustees, University of Connecticut
The State Board of Education
The State Department of Education.

The respective responsibilities and authority of these public agencies should be wholly clear and rationally interrelated. Unless this is the case, confusion, uncertainty, and some degree of jurisdictional friction are inevitable. Despite the undoubted intent of legislation under which these agencies were created that lines of responsibility and authority be clear, substantial confusion and uncertainty on these matters now exist, both within the agencies themselves and within the institutions of higher education affected by them. This confusion is particularly apparent in:

1. teacher certification,
2. approval of programs of teacher education, and
3. approval of degree-granting programs of teacher education.

Under existing law and practice, authority over certification of teachers and other school personnel to be employed in the public schools of the state is vested in the State Board of Education, with specified periodic review of regulations by the General Assembly. Subject to the approval of the State Board of Education, the State Department of Education develops and administers such regulations.

Recent legislation (Public Act No. 330, Section 12) states:

> "The Commission for Higher Education may issue a certificate certifying that the person to whom the same is issued has had the post-secondary education required by any provision of the general statutes or by any regulation of any board for admission to an examination to practice any profession for which evidence of education is required by the provisions of the general statutes. The provisions of this section shall not apply to certification of teachers for the public schools."

The above Section 12 of Public Act No. 330 makes it quite clear that it was the legislative intent to exempt the certification of teachers from authority over it by the Commission for Higher Education and, presumably, to leave this responsibility with the State Board of Education.

> Public Act No. 330, Section 3, Subdivision 5 states:
>
> "(The Commission) shall be responsible for licensing and accreditation of programs and institutions of higher learning."

It is evident from this section of the statute that it was the legislative intent to vest the Commission for Higher Education with exclusive authority over the licensing and accreditation of all programs of higher education. Since teacher education is a part of higher education, it would appear that authority over licensing and accreditation of programs of teacher education vests with the Commission for Higher Education. Authority over "approval of programs of teacher education" heretofore has been vested in the State Board of Education, administered by the State Department of Education.

> Public Act No. 330, Section 13, states:
>
> "The Commission will evaluate and approve, in accordance with established regulations (of the Commission), the application for authority to confer degrees by any person, school, board, corporation. . ."

Again, it is clear that the legislative intent was to vest in the Commission for Higher Education exclusive authority over the approval of all programs leading to academic degrees.

The logic of the interrelationships which now exist between a) teacher certifications, b) approval of programs of teacher education, and c) approval of degree programs, may be stated in practical terms as follows:

- regulations governing certification of teachers require successful completion of prescribed requirements as determined by the State Board of Education;

- applicants for the certificate must have completed the prescribed requirements in an approved program of teacher education -- also determined by the State Board of Education;

- the possession of a bachelor's degree from an approved institution is requisite for the issuance of a certificate, the degree programs being approved by the Commission for Higher Education;

- therefore, approval of degree programs, approval of programs of teacher education, and requirements for certification are closely interrelated and should be mutually consistent.

From the above it appears that the Commission for Higher Education, through its authority to extend or to withhold approval of degree programs in higher education (including programs of teacher education), in effect exercises authority over programs of teacher education eligible to receive approval. Through such authority, the Commission for Higher Education is empowered, in turn, to exercise indirect control over the ability of approved programs of teacher education to satisfy the requirements of certification for graduates from such programs. Although actual conflicts between the agencies having authority over teacher certification, program approval, and degree approval may not now be a reality, such potential conflicts clearly should be eliminated.

The possibility of conflicts growing out of inconsistencies in the statutes and their interpretation has been expressed on numerous occasions during the course of this study. This is a matter of rightful concern to the institutions of higher education which prepare teachers. It must surely be a direct concern to all individuals enrolled in these institutions, who are preparing to teach. Similarly, it must be a matter of concern to the various state agencies listed at the beginning of this section of the report.

The Panel holds that, at the very least, the relationships between the various state agencies empowered by law to exercise authority over teacher certifications, approval of teacher education programs, and approval of degree programs must be clarified and, if necessary, clarified by statutory action. It may be that adequate clarification can be achieved through interagency discussion and agreement, without resort to clarifying legislation. With this in mind as a preferred procedure, the Panel makes the following recommendation.

RECOMMENDATION NO. 6 The Commission for Higher Education should initiate discussions with the State Board of Education, the State Department of Education, the Board of Trustees, Connecticut State Colleges, and the Board of Trustees, University of Connecticut, together with other appropriate public and private institutions or agencies, for the purpose of clarifying the respective functions and authority of each such public agency for teacher certification; approval of programs of teacher education and approval of degree programs, and defining clearly the relationships which should exist between these functions.

Should the recommended discussions fail within a reasonable period of time to resolve existing confusions, it is recommended that:

the Commission for Higher Education recommend to the General Assembly such action as may be deemed necessary to accomplish this end.

SECTION E

TEACHER EDUCATION - ROLES OF INSTITUTIONS

The Consultant Panel has studied the recommendations of the *Report to the Governor and the General Assembly* by the Study Commission on Higher Education, dated February 1965. Only those recommendations concerned with the four State Colleges refer explicitly to teacher education, although other wording clearly implies that the Study Commission recognized that both the University of Connecticut and the private institutions of higher education should play an important role in teacher education. This section of the report outlines specifically our recommendations of the respective roles these institutions should play in teacher education.

Public policy and the actions of the Commission for Higher Education and of other state agencies with responsibilities for teacher education should actively support the institutional roles outlined in the following recommendations.

RECOMMENDATION NO. 7 The Panel recommends that the following types of programs and related activities in teacher education are most appropriate for the State University:

1) all degree programs beyond the master's level supported by public funds;

2) master's degree programs for the preparation of
    a) secondary school teachers in all academic teaching areas,
    b) early childhood and elementary school teachers,
    c) teachers in areas of special education, and
    d) special services personnel;

3) baccalaureate degree programs for the preparation of
    a) secondary school teachers in all academic teaching areas,
    b) early childhood and elementary school teachers,
    c) teachers in areas of special education (where four-year programs are appropriate), and
    d) special services personnel (where four-year programs are appropriate);

4) major research activities, particularly those dealing with areas most likely to make significant contributions to theoretical knowledge.

RECOMMENDATION NO. 8 The Panel recommends that the following types of programs and related activities in teacher education are most appropriate for the State Colleges:

1) master's degree programs for the preparation of
   a) secondary school teachers in selected academic teaching areas,
   b) early childhood and elementary school teachers,
   c) teachers in selected areas of special education, and
   d) special services personnel in selected areas;

2) baccalaureate degree programs for the preparation of
   a) secondary school teachers in selected academic areas,
   b) early childhood and elementary school teachers,
   c) teachers in selected areas of special education (where four-year programs are appropriate), and
   d) special services personnel in selected areas (where four-year programs are appropriate);

3) programs of research and experimentation, particularly those which deal with broad areas of educational practices, organizational patterns, and resource utilization;

4) programs in development of closer college-public school-community relationships; and

5) in cooperation with the community colleges and other two-year institutions of higher education, the development of appropriate transfer programs for teacher candidates and the development of two-year

associate degree programs for the preparation of educational technicians and other paraprofessional school personnel, such programs to be based primarily in the two-year institutions.

RECOMMENDATION NO. 9 The Panel recommends the following types of programs and related activities in teacher education as most appropriate for the public community colleges and other public two-year institutions of higher education:

1) programs of two-year general education at levels of quality that meet the standards of comparable programs of general education in the State Colleges and the State University, and which will facilitate the transfer of teacher candidates to the State Colleges and to the University as juniors; and

2) two-year associate degree programs for the preparation of educational technicians and other paraprofessional school personnel, in cooperation with one or more of the State Colleges.

With respect to the private, non-tax-supported institutions of higher education, no further recommendation concerning their respective roles in teacher education is made here, since Recommendation No. 5 (see Section C) is addressed to this matter. Even though no additional recommendation is offered here, the Panel wishes to be on record as believing that continued concern and involvement of the private institutions in programs of teacher education must be encouraged and supported by all appropriate means.

A special note with respect to programs for the preparation of teachers in fields of special education and special services needs to be made. Authority for the offering of programs in these fields should not be given an institution unless both faculty talent and other supporting resources are adequate to insure high quality -- this is crucially important. It has been suggested during the course of this study that the size of some of the State Colleges militates against the offering of such programs. While recognizing the present relevancy of this observation, the Panel also recognizes that the projected enrollments of the four State Colleges (as now planned) eliminate the validity of any such argument. To restrict arbitrarily the State Colleges in developing strong programs in these areas seems unwise for two reasons. First, it arbitrarily restricts the potential "production" of personnel in areas of present and prospective critical need. Second, it severely limits the autonomy of the institution to exercise desirable control over its own program development. Many more professionals in special education and special services areas must be prepared than is now the case. Institutions, even those publicly supported, should be largely autonomous in matters of program development. Should any narrow, limiting, or arbitrary factors -- other than those relating to institutional strength -- be applied to decision-making in matters of program development, Connecticut education will surely suffer.

SECTION F

TEACHER EDUCATION - CRITERIA FOR PROGRAM EVALUATION AND CERTIFICATION REQUIREMENTS

State supervision and control over teacher education, in Connecticut as in most other states, is exercised in three main ways:

1. through teacher certification requirements;
2. through criteria for approval of teacher education programs; and
3. through approval of academic degrees which institutions may award.

Although control over degrees is the most fundamental of these, in practice it is through requirements for certification and criteria governing program approvals that teacher education is most directly affected. This section examines these two kinds of state control and presents the Panel's recommendations concerning them.

The quality of a teacher's preparation is largely determined by the quality of the teacher education program maintained by the institution in which he receives that preparation. The teacher's general education, his mastery of subject matter in the area of prospective teaching, his grasp of professional theory, the character of his clinical experience -- these determine the quality of his preservice preparation. Criteria for program approval should relate to these critical factors and, in turn, establish the guidelines for program development.

Teacher certification, in contrast to program approval, is more a procedural than a substantive matter. Certification provides legal documentation of individual eligibility for employment in the public schools of the state. This documentation is based, in turn, on evidence that the individual possesses the essential personal attributes for teaching and has successfully completed an approved program of preparation, this evidence customarily being provided through endorsement of the individual's application by the preparing institution. Although, technically, the burden of proof lies with the individual, in practice the State of Connecticut regards such endorsement as full satisfaction of required evidence.

Efforts to improve and strengthen teacher education must be directed to the substance and quality of programs rather than to teacher certification as such. The first priority is the quality of programs of teacher preparation. In terms of decisions made on matters of program, the processing and issuance of teacher certificates should be virtually pro forma.

For the reasons briefly outlined above the Panel has given special attention to criteria for program approval and has the following comments to make:

1. It is noted that the current Regulations for the Approval of Teacher Education Programs, issued by the State Department of Education and dated October 10, 1965, stipulate the composition and functions of evaluation committees, set forth the procedures to be followed by these committees, and list nine criteria by which to evaluate programs.

2. Evaluation committee membership is not large enough for the purposes and extent of required evaluation activities outlined by the regulations.

3. The procedures followed by evaluation committees, though reasonably comprehensive, do not place sufficient emphasis on the actual content of courses offered.

4. The Panel regards the nine categorical criteria, covered by the regulations, as being directly relevant to program evaluation but they omit two important criteria which ought to be included: a) research, experimentation, and innovation, and b) qualifications and loads of cooperating teachers who are involved in the instruction, supervision, and evaluation of clinical experience.

5. The evaluative process is inappropriately directed to determining the adequacy of programs to meet certification requirements. This is an orientation with which the Panel cannot agree, since we believe the prime purpose of evaluation is to determine the adequacy of programs for the preparation of highly knowledgeable and skillful teachers rather than the adequacy of certification requirements. Program approval criteria and procedures ought not to be based on protecting certification requirements; they should be based on the need to protect program quality. Certification should not govern program; program should govern certification.

6. The *Regulations for the Approval of Teacher Education Programs* include no reference to a desirable balance between general education, mastery of prospective teaching field, the theoretical part of professional preparation, and the clinical part of professional preparation. It is only by reference to the existing *Regulations for Teachers Certificates* that the evaluation committees are to assess the adequacy, the strengths or weaknesses of programs. This observation relates to and emphasizes the preceding comment (5 above). In this respect, the functions of evaluation committees are now primarily inspectorial and regulatory rather than developmental.

The Panel has been charged with responsibility "to develop recommendations concerning the criteria to be used in the future for evaluating programs of teacher education in the public and private institutions of higher education in Connecticut." We believe these criteria should be based on the following broad areas of consideration:

1. The "balance" presented by the program as between
   a. general education,
   b. the prospective field of teaching,
   c. study of professional theory,
   d. clinical experience.

2. The nature of content in each area.

3. The quality of instruction in each area.

4. The extent and nature of the clinical experience.

With respect to the "balance" between the four areas of instruction and study, the Panel presents the following broad proportions as guidelines:

1. that approximately two-thirds of program requirements be devoted to general (liberal) education and to the prospective field of teaching;

2. that the first two years of study give major attention to work in general education and the teaching field;

3. that the general education requirements be broadly stated to include provocative study in three broad areas of a) the arts and humanities, b) the natural and the physical sciences, and c) the social and the behavioral sciences, with individual programs planned to include substantial work in each of these broad areas, but with no "prescribed" minimum or maximum number of credits in any one area;

4. that approximately a sixth of the program requirements should be in professional theory, including emphasis on behavioral and humanistic studies (history, philosophy, sociology, psychology, economics, anthropology) as applied to educational problems, and on curriculum and methodology; and

5. that the preservice clinical experience account for approximately one-sixth of the total program requirements.

The program balance outlined above differs from the existing criteria for program approval in the following major respects:

* all program requirements are stated in broad terms with no prescribed minimum or maximum "semester hour" or "credit" requirements in any of the four areas of study and instruction;

* the determination of individual program balance is made a matter for decision by the individual and the institution, thus placing greater emphasis on institutional autonomy and student counseling;

* decisions concerning actual course content in all areas are matters for institutional determination, again placing major emphasis on institutional autonomy over matters of program development;

* the first two years of study being mainly devoted to general education and teaching field, admission of the individual to professional study becomes a matter for institutional decision during the second year of study, at which point more relevant evidence of fitness for professional preparation is available; and

* no reference is made to the satisfaction of detailed certification requirements since it is intended that individual fitness for initial certification to teach in the public schools shall be a function of the preparing institution.

With respect to the preservice clinical experience, the Panel outlines its best perception of what needs to be done to assure substantial improvement, together with its recommendations concerning this, at a later point in this section.

With respect to teacher certification, the Panel makes the following observations:

- * determination of individual eligibility for initial and limited certification to teach in the public schools should be the responsibility of the preparing institution;

- * the initial teaching certificate should be "provisional" only and extend for a period of not less than three years nor more than five, during which time the beginning teacher will remain under the cooperative supervision and evaluation of qualified clinical teachers in the schools and personnel of the preparing institutions;

- * during the years of "provisional" certification, the beginner should be expected to demonstrate by his performance his qualifications to be "admitted to the profession of teaching" as a career teacher and, through continued study, to strengthen both his general education and the mastery of his teaching field;

- at the close of the third year of teaching, but not later than the end of the fifth year of teaching, the individual's fitness for career teaching should be determined by three criteria --
  1. the quality of his general (liberal) education,
  2. the mastery of his teaching field, and
  3. his teaching performance;

- determination of fitness based on the first two criteria should be by appropriate, comprehensive examinations; fitness under the third criterion should be determined by the evaluation of teaching performance by qualified clinical teachers not otherwise associated with the beginner's school; and

- the agency responsible for making policies concerning final certification of teachers, establishing criteria and procedures, including the required examinations, and for issuance of the professional certificate, should be a legally constituted Board of Professional Teacher Certification, composed mainly of persons drawn from the teaching profession.

During the initial three- to five-year period of teaching under a provisional certificate, the individual should receive normal annual increments in salary but, upon admission to teaching as a fully qualified professional teacher, there should be a minimum, statewide salary increase of a substantial amount (suggested by the Panel as not less than $1,000) in addition to any normal annual increment to which he would otherwise be entitled.

To effect the needed changes in teacher education programs, the nature and length of clinical experience, the criteria and procedures governing admission to the profession of teaching, the Panel makes the following recommendations.

RECOMMENDATION NO. 10 The Commission for Higher Education should establish statewide criteria for approval of degree programs in teacher education and for approval of teacher education programs leading to initial teacher certification in the public and private institutions of higher education of the state. These criteria, when promulgated by the Commission, should supersede all existing criteria and regulations governing such approvals. The criteria should be stated in broad terms and should deal with the following specific matters:

1. the balance of emphasis given by the program to a) general education, b) the prospective teaching field, c) instruction in professional theory, and d) clinical experience;

2. the distribution of required study, on an individual program basis, within and between a) the arts and humanities, b) the natural and the physical sciences, and c) the social and behavioral sciences;

3. the distribution and general emphasis given to instruction and study in professional theory, including the broad areas of behavioral and humanistic studies and of curriculum and methodology; and

4. the organization, supervision, and evaluation of preservice clinical experience.

RECOMMENDATION NO. 11 The Commission for Higher Education should, through all appropriate means available to it, seek to have established a public Board of Professional Teacher Certification, composed mainly of persons drawn from the teaching profession, whose functions shall include a) making of policies concerning final certification of teachers, b) establishing criteria and procedures for such certification, including the development and administration of required examinations, and c) issuance of professional certificates. The criteria to be established should include direct evidence, based on examination, of the quality of the individual's general education and of his mastery of a teaching field and on professional evaluation of the individual's teaching performance over a period of not less than three years.

The above recommendation is designed to place the admission of career teachers to full-time teaching on a truly professional basis, this basis being directly related to the individual's liberal (general) education, the mastery of his teaching field, and his professional competence as a teacher. It is intended to replace existing reliance on the attainment of a master's degree or the completion of a "fifth year of post-baccalaureate study" or the accumulation of a specified additional minimum number of course credits, as criteria for the standard (career) certificate. If adopted and implemented, teaching in Connecticut would become truly a profession, admission to which would be determined by the individual's personal and professional fitness, evidenced by both intellectual and performance standards, and judged by a representative body of professional peers. The Panel believes that, until such public and professional actions as are here recommended take place, teaching will remain, as it now is, far below its necessary status as a profession.

The following four recommendations are concerned with a series of actions designed to improve the preservice and the inservice clinical experience of prospective teachers and of new, beginning teachers.

RECOMMENDATION NO. 12 The Commission for Higher Education, in establishing statewide criteria for degree program approval and for teacher education program approval, should require that clinical teachers in the public schools, engaged in the instruction, supervision, and evaluation of student teachers and of new beginning teachers, shall have these duties included as an integral part of their total professional load and that compensation for such responsibilities be based on a determined fraction of the clinical teacher's total salary, for each individual supervised, for the total period of such supervision.

This recommendation is intended to honor the responsibilities of the clinical teacher as professional responsibilities; to compensate the teacher accordingly; to redress the existing inequities concerning compensation; and to eliminate the present basis for such compensation which is one of "extra pay for extra work."

RECOMMENDATION NO. 13 The Commission for Higher Education, in its recommendations to the Governor and the General Assembly, should explicitly recommend that the state, in its formula for allocation of funds to local school districts, include the full costs of direct salaries, retirement, and other specified "fringe" benefit costs, directly attributable to that part of clinical teachers' total load involved in the instruction, supervision, and evaluation of the clinical experience of prospective teachers and of new, beginning teachers.

Responsibility for teacher education is primarily a state responsibility. The state should bear the major costs of teacher education, of which both preservice and inservice supervised clinical experience is a necessary part. These costs are now being met almost wholly by the teacher education institutions themselves, without having adequate funds for this purpose at their disposal, or are being subsidized by local school districts from locally-derived tax sources. This situation is wrong in principle and practice and should be corrected.

RECOMMENDATION NO. 14 The Commission for Higher Education, in its actions for improvement of the clinical preparation of teachers, should cause to be established a series of special institutes or workshops designed to prepare both present and prospective clinical teachers in the schools for the highly professional responsibilities of clinical teachers. Such institutes or workshops, as far as possible, should be planned, operated, and evaluated through interinstitutional efforts or consortia, and should include both the public and private institutions of higher education.

It is suggested that these institutes should be held -- initially, at least -- both during the regular academic year and in the summers, in order to make most effective use of total facilities and to serve a maximum number of present and prospective clinical teachers. The length of institutes will have to be a planning decision, but the Panel does not believe their central purposes can be achieved in a block of a few days or by single days spread out over a year or semester. We emphasize the importance of interinstitutional planning, including both the public and the private institutions. Both types of institutions send their prospective teachers into the public schools for clinical experience and it is no less important to the private institutions than to the public institutions that their students have high quality clinical supervision.

RECOMMENDATION NO. 15 The Commission for Higher Education, in its budget recommendations to the Governor and the General Assembly, should include the full costs of the recommended institutes or workshops -- costs of planning, institute faculty salaries, salaries and other compensatory costs of teachers attending such institutes (for the period of attendance), and such maintenance and travel costs of teachers as are over and above normal living costs, either on a per diem or out-of-pocket reimbursement basis.

The recommended institutes are intended to be an important part of the state's efforts to improve teacher education. As such, the costs should be borne by the state, not by the institutions, the schools, or by individual teachers.

RECOMMENDATION NO. 16 In making its budget requests to the Governor and the General Assembly, the Commission for Higher Education should give appropriate consideration to the impact of these recommendations on the numbers and grades of faculty required for effective implementation and the requested budgets for the public institutions should appropriately reflect the results of such consideration.

SECTION G

TEACHER EDUCATION - PRESERVICE PROGRAMS

The 17 Connecticut institutions of higher education now maintaining teacher education programs offer a total of 85 state-approved preservice programs, leading to 22 types of certification. Of these 85 programs, the 5 public institutions offer 37; the 12 private institutions offer 48. The number of different programs offered by single institutions ranges from 1 to 15. The number of institutions offering the same program ranges from 1 to 15. The 22 types of programs and the number of institutions offering each are given below.

Program	Number of Institutions	Program	Number of Institutions
Elementary Education	8	Principal	4
Secondary Education	15	Superintendent of Schools	3
Art	5	General Supervisor	4
Business Education	5	Library	1
Health and Physical Education	3	Vocational Supervisor	3
Homemaking	2	Mentally Handicapped	4
Industrial Arts	1	Physically Handicapped	1
Vocational Agriculture	1	Speech and Hearing	2
Music	7	Guidance Counselor	5
Reading	5	Psychological Examiner	4
		School Hygienist-Teacher	1
		School Nurse-Teacher	1

Neither the intended scope of this study nor the time and resources available have permitted an exhaustive examination of each of the different programs offered by each of the 17 institutions. The Panel's comments concerning existing preservice programs are based on a study of information furnished by the several institutions, data provided by the State Department of Education, the state's Regulations for Teachers Certificates, the state's Regulations for the Approval of Teacher-Education Programs, and on information gained by the study director and the field consultants in their visits to the various institutions.

With respect to requirements in general education, the Panel finds that:

* Elementary education programs require 75 semester hours' credit; secondary education programs require 45 semester hours' credit; programs in special subjects or fields require 40 hours' credit; in most (but not all) programs in vocational education, special education, administration, supervision, and special services fields the basic requirement in general education is that required for one of the three program areas listed above -- that is, from 40 to 75 semester hours' credit.

* Although elementary education programs require 75 semester hours' credit while secondary education programs require only 45 hours' credit, the addition of a minimum of 30 hours' credit in the teaching subject matter field for secondary and special

area teachers makes the total of nonprofessional education requirements approximately the same for these three program areas.

* The total requirements in general education, though slightly less than the Panel recommends (see Section F) are approximately the same proportion of total program requirements. The major changes in requirements, as recommended by the Panel, are:

1. a slightly higher requirement in nonprofessional study, including both general education and special teaching field;
2. greater program flexibility and institutional autonomy over the distribution of these requirements as between three broad areas of:
   a. the arts and humanities,
   b. the natural and the physical sciences, and
   c. the social and behavioral sciences.

With respect to the requirements in the subject matter field (with special relevance to programs in secondary education and in special teaching fields) the Panel finds that:

- * Most programs require a minimum of 30 semester hours' credit in the subject matter field of prospective teaching and its immediately related disciplines.

- * This requirement, when combined with the minimum general education requirement of 40 - 45 semester hours' credit, approximately equals the Panel's recommendations of two-thirds of total program requirements given to non-professional study.

- * The separation of general education requirements and subject matter teaching area requirements, under existing regulations, is unnecessary in individual student program development. Both general education and teaching field mastery might well be strengthened by allowing the distribution to be determined by the institution and the individual student, through carefully planned total programming under competent guidance and counseling.

With respect to the requirements in professional theory, the Panel finds:

- * Elementary education programs require 30 hours in professional education; secondary education and most other programs require

18 hours of professional education; in all programs there are stipulated minimal requirements in

a. foundations of education,
b. educational psychology,
c. curriculum and methods of teaching, and
d. supervised observation, participation, and full-time responsible teaching.

In addition to these requirements, special education programs include a minimum of 12 semester hours' credit in special methods and related areas unique to the field.

* These requirements, taken as a whole, are virtually the same proportions of total program requirements devoted to professional study as recommended by the Panel, with two major exceptions. These exceptions are:

1. secondary education programs presently require only 18 semester hours' credit in professional study;

2. the minimum requirement in clinical experience, as a part of total professional work, is substantially below that which the Panel regards as desirable.

(Present requirements in clinical experience are stated as "at least six but not more than twelve semester hours' credit," as compared with the Panel's recommendation that "approximately one-sixth of total requirements" should be in this area of preparation.)

The Panel believes that although professional requirements, as a part of total requirements, are generally adequate (with the exceptions noted above), the distribution of emphasis within these requirements, particularly with reference to clinical experience, is faulty. We believe that clinical experience is of vital importance to the new, beginning teacher, and represents the part of teacher education programs most in need of improvement.

With respect to the clinical preparation part of professional requirements, the Panel makes a number of observations:

- Only in very exceptional cases would the minimum of six semester hours' credit presently required be adequate to prepare a new beginning teacher to assume full-time, responsible teaching.

- In the great majority of instances, a minimum of at least 12, and preferably 18 semester hours' work at the preservice level should be required.

* If 12 or more semester hours of preservice clinical experience is established as a minimum, the total of such experience, on a statewide basis, would be greatly increased.

* Any substantial increase will be virtually impossible to achieve on a statewide basis under existing circumstances which place severe practical limitations on the number of available and desirable placements, the numbers of qualified clinical teachers, the numbers of faculty available to provide supervision, and other relevant resources.

(For all the above reasons the Panel has made the series of interrelated recommendations concerning clinical preparation contained in this report -- see Recommendation No. 3, Section C, and Recommendations No. 12 through No. 16, Section F.)

* Even though preservice clinical preparation is substantially strengthened through the actions recommended in this report, the need for continued supervision for the new beginning teacher will exist and, to insure this continuance, the Panel has made Recommendation No. 11, Section F.

In summary, the Panel identifies the following aspects of present preservice programs as most in need of modification:

1. the relative rigidity within which programs are required to distinguish sharply, and quantitatively, between general education and subject matter teaching field requirements;
2. the existing rigidity of the required distribution of work within the general education requirements;
3. the over-all inadequacy of the preservice clinical preparation of teachers, both as to length and continuity of the clinical experience and with respect to the amount and quality of the accompanying supervision and evaluation of that experience;
4. the lack of any planned continuity of program as between preservice preparation and the initial years of full-time teaching;
5. the use of certification requirements as the prime determinant of programs -- rather than the reverse;
6. the restrictions on institutional autonomy over matters of program development; and

7. the absence of a clear, public policy which places responsibility for support of teacher education on the state and which makes teacher education a partnership responsibility of the public schools and the institutions of higher education.

SECTION H

TEACHER EDUCATION - GRADUATE PROGRAMS

In the long run the strength of teacher education and, indeed, of elementary and secondary education, rests on a base for improvement provided through strong graduate programs. Such programs are essential to the vitality of instruction, the strengthening of curriculum, and the improvement of services which together constitute the core of organized efforts to improve learning.

The critical significance of graduate programs lies in their relevance to:

1. continued personal and professional growth of teachers and other school personnel who will provide leadership for teachers and direct the operation of schools which are in tune with the rapidly changing needs of communities;

2. the maintenance of research which, under the best of circumstances, cannot be sustained as a major task of undergraduate programs;

3. the contributions to professional knowledge and to knowledge in the academic disciplines;

4. the experimentation essential to development of new and better practices in education, and their validation;

5. the preparation of professional personnel which, in various fields of special education and special services, requires more than baccalaureate-level programs to properly prepare practitioners even for initial entry into practice; and

6. the improvement in standards of practice if these are to meet the sharply increasing demands of an education-oriented society.

Practical considerations, too, strengthen the arguments for strong programs of graduate study.

1. New knowledge and new developments in educational technology demand continuing study on the part of a teacher. This has resulted in a clear national trend toward minimal five-year programs of preservice preparation or for completion of the fifth year inservice for both elementary and secondary teachers. Teachers prepared in Connecticut institutions need to be able to compete on an equal basis with those who are prepared in other states, many of which require five years of preparation.

2. Connecticut requires for issuance of the standard certificate either a fifth year of study (with a minimum of 30 semester hours of work beyond the baccalaureate degree) or a master's degree. This requirement cannot be met in the absence of broad availability and accessibility of graduate programs to the great majority of Connecticut's elementary and secondary teachers.

3. As the number of career teachers seeking advanced degrees, including the doctorate, continues to grow, graduate programs through at least the master's degree level will become increasingly important if the teacher attrition rate is to be kept to an endurable level.

Connecticut has not ignored graduate study in teacher education, even though public policy and financial support have failed to honor adequately the demands of such study. Increasing concern over graduate study has been reflected in a series of studies and actions over the past 20 years. An excellent summary of these efforts is provided in the document, A Decade of Growth: 1955 - 1965, the biennial report of the Four College Graduate Committee. It is clear from this summary that concern over graduate programs, particularly at the master's degree level, has been shared by public school administrators, the public and private institutions of higher education, and various fact-finding and study groups (e. g. , Governor Bowles' Fact Finding Commission on Education - 1948-1951) during the last two decades. Despite this concern, efforts to initiate graduate-level programs in the public institutions were sporadic and, on the whole, abortive prior to 1955. These efforts bore fruit, however, when in 1955 the State Board of Education authorized the Danbury State Teachers College, New Haven State Teachers College, and the Teachers College of Connecticut (New Britain) to offer graduate programs leading to the Master of Education degree, beginning with the summer session of 1955. This authorization was extended to Willimantic State Teachers College one year later. The authorization was changed to Master of Science before any degrees under the newly-authorized programs had been awarded.

The need for such action is dramatically demonstrated by developments in the four State Colleges during the first ten years of these programs. During this decade graduate enrollments in the State Colleges have grown from an initial 310 students (Summer, 1955) to 6, 676 (January, 1965) -- a twenty-fold increase. From 1960 to 1965 graduate enrollments in these institutions alone practically doubled -- from 3, 618 in June, 1960 to 6, 676 in January, 1965 -- and graduate enrollments continue to grow.

The demand has not been limited to the four State Colleges. The older established private institutions, previously committed to graduate education and already offering fifth-year or master's programs to limited numbers of carefully selected students, have continued such programs, but even so have not made a major inroad on the numbers of Connecticut teachers needing and desiring graduate study. They have, however, been a source of strength and support for newly-developing programs in the public institutions. The newer private institutions, particularly the University of Hartford, the University of Bridgeport, and Fairfield University, have also recognized the need for graduate programs for teachers and their offerings have increased the opportunities available to substantial numbers of Connecticut's teachers.

Graduate program developments during the last ten years reveal four positive facts:

1. the need and desire of Connecticut's elementary and secondary school teachers for graduate study;

2. the readiness of teachers to undertake graduate study, even though the cost of such study has had to be borne largely by the teachers themselves;

3. the ability of the public and private institutions of higher education in the state to develop and maintain such programs even when the resources for their support are meager; and

4. the continuing and growing need for graduate study in teacher education.

These same ten years have clearly revealed what many foresaw when the new programs were begun -- the need for resources to offer high quality work and to meet rapidly growing enrollments. It is no derogation of past efforts when the Panel observes that present support of graduate programs is sadly inadequate. If these programs are to develop a quality which is equal to their high purpose, or to serve well the needs of the teachers enrolled, or to meet the even more searching requirements of the schools in which they teach, they must have sharply increased support. This is true not only of the public institutions but for those newer private institutions intent on developing strong graduate programs.

It has been alleged that the dramatic growth of graduate enrollment is more a function of the state's standard certification requirements than a reflection of genuine personal and professional motivation of teachers. We reject this view as unworthy of serious consideration even while recognizing its probable validity in specific instances. To do otherwise assumes a substantial lack of professional motivation among Connecticut's teachers -- an assumption which the testimony of those most knowledgeable about the matter and the further fact that almost a third of Connecticut's teachers are now engaged in graduate study, surely belies.

Public policy is gravely inconsistent when on one hand it requires the master's degree (or its equivalent in systematic study beyond the baccalaureate degree) for a standard teaching certificate and on the other hand fails to provide adequate support for programs to meet such a requirement. To require of all teachers a baccalaureate degree for entry into teaching, when the costs are borne largely by the state, while also requiring the master's degree for continuance in a career of teaching, when the individual must assume prime responsibility for the costs, reflects not only an inconsistent public policy but also a readiness of the state to perpetuate an arbitrary heavy attrition rate among teachers. This, again, is neither in the immediate nor the long term interests of the state in encouraging improvement in the over-all quality of Connecticut education.

The limitations imposed on this report do not permit a more exhaustive exposition of the Panel's concerns over graduate programs in teacher education. We have intended in this brief treatment to provide a background for three recommendations concerning graduate programs which follow.

They aim to strengthen graduate study and rest on our perceptions of what is required if graduate study is to be of the highest quality. The recommendations address themselves primarily, but not exclusively, to the public institutions which will inevitably bear the major responsibility for the graduate study of Connecticut's teachers.

RECOMMENDATION NO. 17 The Commission for Higher Education, in its own actions and in its recommendations to the Governor and the General Assembly, should follow a policy of providing budgetary and other support for graduate programs of teacher education in the institutions under its jurisdiction at levels not lower, and preferably higher, than those designated for support of undergraduate programs of teacher education in those institutions.

The Panel believes the above recommendation represents a minimum level of support for graduate programs of teacher education, if such programs are to be of high quality. Specifically, such support is required if:

1. graduate faculties are to become essentially full-time rather than, as is presently the case, heavily part-time;

2. graduate faculties are to be upgraded with respect to academic preparation, professional knowledge, and competence in teaching;

3. recruitment of graduate faculty members is to be even reasonably competitive in a national "professional personnel market";

4. research of the highest quality is to be undertaken as a part of graduate programs of teacher education;

5. graduate faculty teaching loads are to permit significant research activities and allow adequate individual work with graduate students; and

6. a systematic and meaningful program of individual graduate student counseling and advising is to be maintained.

RECOMMENDATION NO. 18 The Commission for Higher Education should support a policy of maintaining graduate program tuition fees in the institutions of higher education under its jurisdiction at a level no higher than those designated for undergraduate programs of teacher education in those institutions.

This recommendation is intended to redress what the Panel believes to be a glaring inconsistency, if not an inequity, with respect to the state's present policy on tuition fees charged undergraduate and graduate students respectively.

RECOMMENDATION NO. 19 The Commission for Higher Education should undertake a study in depth of the need for more extensive state scholarship and loan funds for Connecticut secondary school graduates who desire to become elementary or secondary school teachers, and for persons already holding the provisional certificate and teaching in the public schools of the state, as a possible means of attracting a larger proportion of qualified young people into teaching and of encouraging highly qualified individuals already teaching in the public schools to remain in teaching as a career.

The need for the highest talent in teaching is acute and persistent. The need exists at all levels of the educational enterprise and is highlighted at two major points -- initial entry into teaching and during the first few years where the attrition rate is especially heavy. The two recommendations (No. 17 and No. 18) are designed to be complementary in their effects. Their cost to the state would represent little, if any, increase beyond that now occasioned by the efforts required to recruit and retain teachers to fill the gap caused by high attrition rates.

We hope that Connecticut, in whatever future actions it may take on scholarship and loan programs affecting teacher education, will place no arbitrary restrictions on the recipients of such funds, either with respect to the institution attended (public or private; in or out of state) or, indeed, by requiring as a condition that the recipient teach in the public elementary or secondary schools of the state.

SECTION I

TEACHER EDUCATION - NEW PROGRAMS

Contributing to the steadily rising demands for teachers and other school personnel is a growing need to provide special instruction and special services. Compared with the demands for more classroom teachers, occasioned largely by increased enrollments and reductions in class size, the demands for special instruction and for special services have risen much more sharply.

Special education, in contrast to regular classroom teaching, includes a widening range of instructional needs, each requiring specialized preparation which regular programs of teacher education do not provide -- nor, indeed, normally need to provide. These specialized areas of preparation are based on the unique needs of children who, because of various kinds of individual differences, are exceptional in ways which make it difficult or impossible for them to profit from normal instruction or for adequate instruction to be provided under normal classroom conditions. They embrace the specialized needs of children who are mentally handicapped, physically handicapped, seriously deficient in vision or hearing, emotionally disturbed, and others.

Special services cover those areas of children's needs essential to their learning and profit which normal organized instruction does not meet.

These include individual counseling, group guidance, psychological testing, psychological services, conservation of vision and hearing, physical therapy, mental therapy, dental hygiene, psychiatric services, and others.

Not to be overlooked or neglected either, are the needs of those exceptional children most often referred to as the gifted, the talented, the intellectually superior. These children, too, need specialized adaptations of conventional instruction and of resources for learning. If such adaptations are not made they become the victims of institutional arrangements which limit and frustrate and, in turn, effectively dull genuine intellectual curiosity.

Public responsibility for education is for all children, regardless of their unique differences in endowment, and irrespective of the extent to which these differences require specialized instruction, specialized services, and nonconventional arrangements. The time has passed when public policy for education was limited largely to providing facilities, resources, and instruction, based almost wholly on the "mythical average," leaving to private efforts (most often those of parents) the responsibility for educating the exceptional child. In many ways this change in public policy and public attitude is the highest expression of the American commitment to universal education and to the principle of equality of educational opportunity.

In Connecticut as elsewhere, a growing recognition of public responsibility for the education of exceptional children has led to increasing commitment of state resources to meet these needs. It is no disparagement of this effort and what has already been achieved to state that much more must be done. The Panel notes that the 1965 General Assembly, in Public Act No. 330, Section 20, provided as follows:

> "If the Commission for Higher Education determines that no approved program of teacher education within the state is available for the preparation of teachers of aphasic children or of deaf children, said Commission may provide scholarship aid for such students as it may designate to attend approved programs in institutions in other states. . . ."

Thus, the General Assembly, interpreting and representing the expressed desires of the people of Connecticut, clearly recognized a number of relevant and interrelated facts.

1. The existence in the state of significant numbers of "aphasic and deaf children" for whom existing educational provisions are inadequate.

2. The responsibility of the state to provide improved opportunities for the education of such children.

3. The recognition that such improved opportunities, above all other considerations, require specially prepared teachers.

4. The number of such teachers presently available in Connecticut is inadequate.

5. The lack of programs for the preparation of such teachers in the state virtually assures a continuing lack of qualified teachers.

6. The necessity to turn to out-of-state programs and sources for such teachers in the absence of adequate in-state programs of preparation.

7. The need to provide state scholarship aid for the preparation of Connecticut students attending such programs out-of-state.

The foregoing series of "relevant and interrelated facts" may attribute to the General Assembly more of explicit intent than is warranted, but the implicit logic of the language of the Act seems wholly clear. What is not explicit in the Act, however, is any reference to either immediate or eventual intent to provide programs within the state that would meet the needs for special personnel in these areas. We assume the powers of the Commission, as set forth in Section 3, Subdivision 5, Public Act No. 330, concerning the "licensing and accreditation of programs. . ." does, in fact, vest the Commission with responsibility and authority to approve and support the development of such programs as may be needed.

The Panel also notes that during the course of this study, frequent reference has been made to the need for special programs better to prepare teachers for schools located in, or predominantly serving children coming from, areas of "urban blight," "inner-city," "deprived environments," and so on. Indeed this has been stated as an urgent need in Connecticut. While recognizing the unique and difficult challenge teachers confront in such schools, we do not believe the answer is to be found in specialized education programs.

Our reasons for this belief merit statement. First, increasing human mobility and resultant heterogeneity of children attending any given school make it essential that all teachers have a minimum basic understanding of cultural, ethnic, and community differences such as will prepare them to effectively deal with children with a wide range of backgrounds. If we perceive such understanding as being primarily a product of specialized programs of preparation, then all programs for the preparation of teachers logically would be regarded as programs in special education.

Second, the basic understandings teachers require in dealing with children of widely variant cultural inheritance, family, and environmental backgrounds, are embedded most importantly in the social and behavioral sciences. Greater emphasis on these areas of study, either as a part of the general education content or as a part of professional course work, seems much more appropriate to the needs of all teachers than recourse to special education programs.

Third, we believe the better solution to problems of teaching and learning in schools where children come from limiting environments and backgrounds, lies in three concurrent and interrelated approaches:

a. a greater attention to the social and behavioral sciences in all programs of teacher education;

b. improving preservice and inservice clinical experience of teachers; and

c. providing more, better, and a wider range of special services and learning resources in schools serving such children.

The Panel has not found an existing source of comprehensive, statewide, and reliable data concerning the actual numbers of children in Connecticut whose proper education may be presumed to require teachers with special preparation. The partial studies of which we have knowledge indicate these numbers are substantial in practically all areas of special education. The evidence also indicates the numbers of teachers and other school personnel now being prepared in special education and special services programs within the state are clearly inadequate. Not only are they inadequate to meet the present demands for such personnel in the elementary and secondary schools of the state, but they are even more inadequate to meet the certain future increase in such demands. Similar demands are also rising sharply elsewhere and dependence of Connecticut on out-of-state sources for these persons or reliance on out-of-state programs to prepare in-state students in these areas is imprudent and wholly unlikely to meet the state's needs.

The data required on which to make specific recommendations of specific new programs are not now available. For this reason the Panel is not prepared to make such specific new program recommendations. The weight of informed judgments of those most knowledgeable in this area, as well as our experience elsewhere, however, strongly support the two following recommendations.

RECOMMENDATION NO. 20 The Commission for Higher Education should take immediate steps to make a comprehensive, statewide inventory of the numbers of exceptional children in the state requiring special education and special services for their proper instruction and development. On the basis of data developed by this inventory the Commission for Higher Education should determine the areas of special education and special services in which expansion of existing programs or establishment of new programs is required and should take such steps as may be needed to achieve these ends.

RECOMMENDATION NO. 21 The Commission for Higher Education, in expanding existing programs or in establishing new programs of special education and of special services, should give consideration to both the public and the private institutions of higher education whose resources and institutional commitments provide assurance that programs of high quality will result.

The Panel adds a concluding observation. We have already included a "special note" in Section E, Roles of Institutions, with respect to any arbitrary restriction imposed on the State Colleges in their efforts to develop special education and special service programs of quality. We repeat this caution here. In addition to actions of the Commission establishing new programs, consideration should be given to the possible wisdom of authorizing the establishment of some of the already existing programs in some of the institutions not now offering them, and of increasing the numbers of students in those programs already operating -- either or both. The likelihood of creating an oversupply of special education and of special services personnel under a prudent combination of all three approaches, appears to be so remote that such considerations should not deter the adoption of any one or of any combination of these approaches.

SECTION J

TEACHER EDUCATION - FACULTY

In higher education, no less than in elementary and secondary education, the quality of learning is directly and positively related to the quality of instruction. Most important of the factors determining the quality of instruction is the faculty itself. The Panel believes this to be of such importance that, although it was not charged with inclusion of faculty among the areas to be examined in this study, the following series of comments is made.

1. Faculty members must keep in continuing and meaningful contact with the schools. In general, changes in elementary and secondary education in recent years have proceeded at a faster pace and on a broader front than has been the case in higher education. The schools, being inescapably exposed on a day-to-day basis to all the forces of social, cultural, economic, and demographic change in local communities, must always make efforts to adjust and respond to these forces. Their locus in local communities, their major support coming from local communities, and their daily operating policies and procedures being substantially fashioned by community desires and demands, denies to them the same degree of insulation

which higher education tends to enjoy. In teacher education, as in no other segment of higher education, it is essential for the faculty to keep abreast of changes in schools. In many respects the adequacy of teacher education programs depends on current awareness and understanding by the college faculty.

We draw upon our collective and personal experience to document the observation that, once removed from the main arena of local school action, the individual rapidly loses touch with the realities of school life. Those who instruct prospective teachers can ill afford to be insulated against or isolated from these realities.

Institutions of higher education and individual faculty members should make every possible effort to see that both institutional and personal contacts with local schools and communities are maintained on a continuous basis.

2. It is no less essential that college faculty members, in their teaching, use the methods and materials, whenever they are appropriate, which new, beginning teachers will be expected to use in the schools. The Panel would not argue that any

specific practice or method is likely to be equally appropriate at all levels of instruction, in all subject matter areas, or at all degrees of student maturity. However, precept should be accompanied by example and demonstration, where this is possible. There is virtually unlimited opportunity for this to occur, given the perception of its relevance and the will to do so, in many areas of modern practice in schools which, by and large, are ignored in college teaching. Team teaching, flexible grouping, use of educational technology, use of paraprofessional personnel, flexible scheduling -- these are only a few of the many ways of organizing and conducting instruction which would appear to have no less relevancy at the college level than is the case in the schools.

3. Although research is not a primary function of most elementary and secondary school teachers, the lack of understanding concerning the fundamental role of research and experimentation in the improvement of education, represents a serious threat to the improvement of instruction. Much of the research and experimentation which most needs to be done in education involves school participation. Such participation involves

teachers in these schools. When such activities are regarded by teachers as intrusions or are met with hostility, they are difficult to carry on at best and impossible to conduct at worst.

Regardless of the degree of direct participation of the individual faculty member in research or experimentation, it is incumbent that he present a favorable attitude toward such efforts and, insofar as reasonable, provide evidence of that attitude in his own instruction. It is possible for all teachers, regardless of level and area, to engage in informal experimentation in their own instruction. This effort alone, however limited, can set a tone whose effects on students will not be lost.

4. There is an increasing tendency in our schools, as the size of the enterprise grows, its complexities increase, and the process of specialization expands, for instructional personnel to attribute their "problems" and "frustrations" to inept administration. The reverse tendency among administrators, too, is not uncommon.

It is not only from organized courses in administration or supervision that prospective teachers form their perceptions and attitudes of these functions and those who discharge them. Faculty members -- other than those who teach such courses -- also have an important and, in many cases, the most vital role to play in determining the prospective teacher's attitudes on such matters. In this sense, part of the teacher's general education comes from professional instruction itself and all faculty members share, in some degree, the responsibility for general education. Trite as it may be, college teachers too need to have a sound general education and to understand its relevance to the over-all function of instruction.

5. The Panel expresses no bias against the employment of part-time teachers in the schools or as members of college faculties. However, it strongly believes that major, or even substantial, reliance on part-time faculty places too low a ceiling on program development, the quality of instruction, and the conduct of many kinds of activities which should be a part of any teacher education program. This is particularly true at the graduate level and is significantly the case at the undergraduate level. Every effort should be made to maintain as large a proportion of full-time faculty members as possible. To this end, the levels of support available to the institutions providing teacher education programs can be the critically determining factor.

6. The Panel notes the significant increase in recent years in the numbers of faculty holding the doctor's degree in the state's public institutions of higher education. This is a most encouraging development and one whose continuance should be strongly supported by the state in its provision of funds. The same kind of development is no less desirable in the private institutions.

7. The numbers and grades of total faculty engaged in teacher education programs -- particularly in the public institutions -- required to implement the recommendations made in this report, will be substantial. The Panel has not estimated the extent of needed increases but, in the areas of research, preservice and inservice clinical experience and in the graduate programs, the necessity of substantial increase is obvious.

8. Although the practice exists in limited degree in some of the Connecticut institutions of higher education, the Panel urges that serious consideration be given to according some academic rank to clinical teachers in the schools, particularly to those who are involved in the seminars or workshop activities accompanying the preservice clinical experience.

SECTION K

TEACHER EDUCATION - RESEARCH, EXPERIMENTATION, AND INNOVATION

Vigorous programs of research, experimentation, and innovation are essential to the long-term vitality and improvement of teacher education. Such activities require supporting public policies, adequate funding, and a favorable institutional climate.

Nowhere in the statutes, the regulations of the state agencies concerned with teacher education, or in the stated commitments of the public or private institutions of higher education which prepare teachers, has the Panel been able to find any clear, overt expression of commitment to research and innovation in teacher education. Those most directly involved in teacher education declare their belief in the values of such activities but with too rare exceptions do these beliefs appear to be given practical substance in terms of program priorities.

It is equally clear that even modest resources designated for support of research and experimentation are almost entirely lacking. This is true not only of institutional budgets but of public appropriations as well, and of grants from private foundations and from Federal sources. Such research and experimentation as now exists in teacher education appears to be supported primarily by efforts of individual faculty members or by institutional "scrounging." No better evidence of a lack of vitality in these areas can be cited than this lack of resources for their support.

Compelling reasons exist for maintaining vigorous research, experimental, and innovative activities in teacher education. The Panel cites the following.

1. Research, through the hypotheses made, the procedures employed, the development of models, the field testing of models, and the validation of results, provides the essential base for rational planning and for making decisions affecting public policy and the execution of public policy. It is critically important at both levels.

2. Education is based on a commitment to effect change in individual behavior. This commitment is the basis for curriculum development and teaching methods. Improvements in both are primarily a result of research and experimentation, and of changes in practice which follow. Static methods and static programs are not hospitable to the dynamic process of education.

3. Few will disagree that the truly unique function of the schools is to encourage, support, and develop intellectual inquiry.

Research and experimentation, though not constituting the only ways by which intellectual inquiry may be encouraged and developed, are indispensable elements of any organized efforts in this direction.

4. The quality of learning bears a direct and positive relationship to the quality of instruction. In many important respects the quality of instruction is primarily a function of the lively mind, the creative spirit, the imaginative individual. Such individuals -- as teachers, administrators, supervisors, or in other professional roles -- are most frequently to be found where research, experimentation, and innovation exist and are encouraged.

5. All levels and areas of the educational enterprise desperately need high human talent. Activities which call for intellectual and creative abilities, constitute a fundamental way for bringing high talent into education and retaining it.

6. Education is the largest of all our publicly and privately supported commitments. It reflects, at any given point in time, the hopes, the perceptions, and the beliefs of society. In a society as strongly and unmistakably committed to research

> exploration, and change in other areas of public and private enterprise, education can neither insulate itself against nor afford to be isolated from these dynamic forces in society as a whole. Change in education is inevitable and deliberate; planned embracement of change is much more likely to be rationally undertaken and effectively pursued than is the case when it results from crisis or from organized, external pressures.

Elsewhere in this report reference has been made to the kinds of forces which are compelling change in our patterns of social, economic, political, and demographic behavior. These deserve the emphasis of some repetition here:

1. the continued growth in population;
2. the increasing mobility of individuals and of families;
3. the increasing ethnic, cultural, and economic "mix" of populations in communities, cities, regional areas;
4. changes in our national economy, represented, in part, by movement from an industrially-oriented manpower market to an increasingly service-oriented employment market;

5. the continuing rise in personal and family incomes and a rise in all kinds of "expectations" which such increased income begets and supports;

6. the heightened educational requirements for widening areas of employment, occasioned in major degree by the changes in the employment market;

7. the impact of modern technologies on every facet of life;

8. the dramatic and educationally traumatic "explosion" of man's knowledge; and

9. the vastly quickened pace at which change takes place.

The basic reasons for a vigorous program of research and experimentation and the forces operating to compel change, outlined briefly above, give ample support for the two following recommendations.

RECOMMENDATION NO. 22 The Commission for Higher Education should establish a State Council for Research and Experimentation in Teacher Education, said Council to be appointed by the Commission and to include persons drawn from the State Board of Education, the Board of Trustees of The State Colleges, *the Board of Trustees of the University of Connecticut, Boards of Trustees of the private colleges and universities, the faculties and administrators of the institutions of public and private higher education and of the schools and from lay citizens of the state. It should be the function of the Council to be advisory to the Commission for Higher Education with respect to broad areas of research and experimentation relevant to teacher education and to present its recommendations concerning such matters at least once each year.*

The intent of this recommendations is to provide a systematic, organized focus of concern for research and experimentation in teacher education, to assure the articulation of these concerns to the Commission in clear and forceful fashion and to lay an objective base for Commission and institutional requests for funding support of such activities by the state -- and from other sources. It is intended to provide a broad base of concern among state agencies having responsibilities for teacher education, institutional faculties and boards of trustees, the public schools, and the public at large. It is also intended to lay a broad base of support for research and experimentation, other than that which individual institutions or individual faculty members alone are likely to command. Clearly it is not intended to limit or proscribe recommendations and requests for support emanating from individuals or institutions whose initiative in this area must be encouraged and zealously safeguarded. If the Commission is to develop and implement sound policies for teacher education it should have a strong, continuing program of research and development on which to base its policy formulation.

RECOMMENDATION NO. 23 The Commission for Higher Education, in making its reports and recommendations to the Governor and the General Assembly with respect to the budget, as required by Public Act 330, Section 6, should recommend state support of research and experimentation in teacher education as a separate line item.

The following brief list illustrates some of the areas to which the Panel believes research and experimentation should be addressed.

With respect to additions to basic knowledge:

- research in learning theory and strategies of learning;
- research in communications theory and systems of communication;
- research in methods of instruction based on different theories of learning and theories of communication; and
- research and evaluation of the effectiveness of various methods of instruction.

With respect to improved use of resources (time, talent, materials, and technologies):

* experimentation in the extended use of time within which the total resources for instruction are actively used;

* experimentation in new patterns of utilization of professional talent;

* experimentation in better utilization of instructional materials, including electronic and other modern means of receiving, storing, retrieving, distributing, and using information;

* experimentation in interinstitutional pooling and use of talent and materials (libraries, instructional personnel, research itself);

* experimentation in better use of educational technicians and other paraprofessional personnel in the schools and in the institutions of higher education.

With respect to the critical areas involving relationships between the public schools and the institutions of higher education:

* experimentation in varying patterns of organizing the clinical experience part of professional preparation;

- experimentation in varying ways and means by which teachers and other school personnel can be effectively involved in areas of preservice and inservice education of teachers, other than by direct involvement in clinical experience; and

- experimentation with various programs designed to improve pre-admission guidance and counseling of secondary school juniors and seniors already having interest in becoming teachers or whose interest may be developed.

With respect to the better understanding and use of community "cultures" and resources:

- community sociological studies;

- patterns of continuing education for adults and for families in communities of varying characteristics; and

- "the unique role(s)" of the public schools in areas other than those being served by the inschool instructional program.

The foregoing list of possible areas for research and experimentation is illustrative, not comprehensive. We recognize that some work in these suggested areas already is being done; in none do we believe present support is adequate.

SECTION L

TEACHER EDUCATION - FUTURE NEEDS FOR TEACHERS AND OTHER SCHOOL PERSONNEL

The Commission for Higher Education requested the Academy to make projections of Connecticut's needs for teachers and other school personnel over the next 10 to 15 years. This section deals with the Panel's projections for each of three five-year periods -- ending 1970, 1975, and 1980 respectively. The projections and the data on which they are based are presented in greater detail in the appendices. These projections have been limited to:

1. Population projections (Table 1).
2. Projections of population under 18 years of age (Table 2).
3. Projections of percentages of population under 18 years of age attending public and private schools (Table 3).
4. Projections of enrollments attending public and private elementary and secondary schools (Table 4).
5. Per cent difference in study projections compared with State Department of Education projections (Table 5).
6. Projections of numbers of classroom teachers needed by public elementary and secondary schools (Table 6).

7. **Projections of total numbers of new teachers needed by public elementary and secondary schools (Table 7).**

Table 1

Connecticut Population
1960 - 1980

Year	Population (thousands)	Index 1960=100	U. S. Population (millions)	Index 1960=100
Actual				
1960	2,535	100	179	100
1965	2,833	112	194	108
Estimated				
1970	3,064	121	208	116
1975	3,345	132	225	126
1980	3,670	145	245	137

Source: U. S. Census Bureau Population Estimates, Series P. 25, No. 326 February 7, 1966. Series IB pg. 14.

Based on the total population projections (Table 1), the percentage increases for 1970, 1975, and 1980 respectively, compared with actual population in 1960 and estimated population in 1965, are shown below.

	1970	1975	1980
Compared with 1960 - Actual	+21%	+32%	+45%
Compared with 1965 - Estimated	+ 8%	+18%	+30%

Table 2

Connecticut Population
Under 18 Years of Age
1960 - 1980
(in thousands)

Year	Under 18 Years	Index 1960=100	Total Population	Index 1960=100
Actual				
1960	861	100	2,535	100
Estimated				
1965 (prelim.)	973	113	2,833	112
1970	1,068	124	3,064	121
1975	1,158	134	3,345	132
1980	1,279	149	3,670	145

Source: U. S. Bureau of the Census

Based on the projections of population under 18 years of age (Table 2), the percentage increases for 1970, 1975, and 1980 respectively, compared with actual numbers in 1960 and estimated numbers in 1965, are shown below.

	1970	1975	1980
Compared with 1960 - Actual	+24%	+34%	+49%
Compared with 1965 - Estimated	+10%	+19%	+30%

Table 3

Percentages of Population Under 18 Years of Age Estimated to Attend Public and Private Elementary and Secondary Schools, by Each of Three Age Groups 1965 - 1980

	5 year olds (kindergarten)	6 - 13 year olds (grades 1 - 8)	14 - 17 year olds (grades 9 - 12)
1965	90%	99.1%	93.5%
1970	92%	99.1%	94.5%
1975	94%	99.2%	95.5%
1980	96%	99.2%	96.5%

Table 4

Estimated Enrollment in Connecticut's Public and Private Elementary and Secondary Schools 1965 - 1980

Public and Private Enrollment

	Total	Public	Private	Private Enrollment As Per Cent of Total Enrollment
Actual				
1965				
Kg.	54,506	51,006	3,500	6.4
1 - 8	460,861	375,061	85,800	18.6
9 - 12	179,281	142,681	36,600	20.4
Subtotal	694,648	568,748	125,900	18.0
Special	5,948	5,948		
Total	700,596	574,696		
Estimated				
1970				
Kg.	55,200	51,600	3,600	6.5
1 - 8	480,635	393,135	87,500	18.2
9 - 12	249,000	205,100	43,900	17.6
Subtotal	784,835	649,835	135,000	17.0
Special	7,850 (1)	7,850		
Total	792,685	657,685		
1975				
Kg.	63,000	59,250	3,750	6.0
1 - 8	498,500	410,500	88,000	17.7
9 - 12	274,000	227,750	46,250	16.9
Subtotal	835,500	697,500	138,000	16.4
Special	8,360 (1)	8,360		
Total	843,860	705,860		
1980				
Kg.	74,800	71,050	3,750	5.0
1 - 8	554,000	466,000	88,000	15.9
9 - 12	279,850	231,600	48,250	17.2
Subtotal	908,650	768,650	140,000	15.3
Special	9,100 (1)	9,100		
Total	917,750	777,750		

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(1) 1% of regular enrollment.

The projected enrollment in public elementary and secondary schools (Table 4), when compared with the projections of such enrollments made by the Connecticut State Department of Education, are generally substantially higher, as shown by the figures appearing below.

Table 5

Per Cent of Difference in Study Projections Compared
with State Department of Education Projections

	1970	1975	1980
Kindergarten (5 year olds)	+9.4%	+5.6%	+19.9%
Grades 1 - 8 (6 - 13 year olds)	-3.9%	-1.8%	+1.8%
Grades 9 - 12 (14 - 17 year olds)	+22.9%	+19.6%	+23.3%

Table 6

Total Number of Classroom Teachers Needed
for Connecticut's Public Elementary and Secondary Schools
1970 - 1980

	Kindergarten (40 to 1)	Grades 1 - 8 (25 to 1)	Grades 9 - 12 (20 to 1)	Special (15 to 1)	Total(1)
1970	1,290	15,725	10,255	520	27,790
1975	1,480	16,420	11,385	555	29,840
1980	1,775	18,640	11,580	605	32,600

(1) Does not include provision for children below the age of five.

Table 7

Total Number of New Teachers Needed in Connecticut's Public Elementary and Secondary Schools Annually 1965 - 1980

	Total Teaching Staff	Five Year Increase	Annual New Positions	(1) Retirements, Resignations, & Withdrawals	Total New (2) Teachers Needed Annually
Actual					
1965	24, 520				
Estimated Annually					
1970	27, 790	3, 270	654	2, 223	2, 877
1975	29, 840	2, 050	410	2, 385	2, 795
1980	32, 600	2, 760	550	2, 600	3, 150

(1) A rate of 8% is used based on actual retirements, resignations, and withdrawals.

(2) Does not include teachers for children below age of five, specialists, nurses, social workers, psychologists, guidance counselors, or supervisory personnel.

Some Significant Conclusions Based on the foregoing projections the Panel draws the following conclusions:

Conclusion No. 1. The total numbers of new teachers needed by Connecticut's public elementary and secondary schools in 1970, 1975, and 1980 respectively will be much greater than the most recent estimates of needs by the State Department of Education. Our estimate of needs exceed department estimates by

74% in 1970 (1,224 more new teachers);

70% in 1975 (1,148 more new teachers);

63% in 1980 (1,215 more new teachers);

and these estimates, we believe, are conservative.

Conclusion No. 2. The estimated numbers of new teachers needed by Connecticut's public elementary and secondary schools in 1970, 1975, and 1980 respectively are greatly in excess of the numbers of new teachers now being prepared in all of Connecticut's institutions of higher education. They are also much greater than the projections of future numbers of new teachers which these institutions are presently planning to prepare.

Conclusion No. 3. The estimates of numbers of new teachers needed by Connecticut's public elementary and secondary schools in 1970, 1975, and 1980 respectively are conservative. Furthermore, they do not include any estimate of numbers of new teachers the schools will require by reason of possible future developments such as:

1. making kindergartens a requirement in every school district in the state;

2. extending downward the span of public education to include children of less than five years of age -- the present pre-school years, or extending upward the compulsory school attendance age;

3. extension and expansion of special services (nurses, social workers, psychologists, guidance and counseling personnel, supervisory personnel, and others);

4. reduction in the pupil-teacher ratios -- arbitrarily "pegged" in our estimates at 40:1 (kindergarten); 25:1 (Grades 1 - 8); 20:1 (Grades 9 - 12); 15:1 (special education);

5. increasing the participation of elementary and secondary school personnel in the preservice and inservice instruction, supervision, and evaluation of student teachers and new beginning teachers; and

6. inauguration of new policies or extension of existing policies with respect to "released time," "leaves," or "sabbaticals" for teachers.

Although we have not estimated the additional numbers of new teachers which would be needed as a result of any one, or a combination of such possible future developments as those listed above, it is obvious that such developments would increase very substantially the numbers of new teachers required, over and above the projections presented in this report.

Conclusion No. 4. In order to provide the classroom teachers and other school personnel required by the public elementary and secondary schools of the state (see Recommendation No. 1, Section C) several interrelated moves will be required:

1. vigorous recruitment of promising high school graduates into teaching, including statewide precollege guidance and counseling in the high schools;
2. identification and recruitment of promising graduates from the general education (transfer) programs of the developing two-year institutions of the state;
3. continuance and expansion of efforts to attract into teaching more mature persons who already have a college education, but who lack professional preparation -- the present Intensive Program for College Graduates, or some adaptation of such a program;

4. adoption by the state of a policy which admits to the public institutions of higher education all qualified resident high school graduates (see Recommendation No. 2, Section C);

5. efforts by the schools to achieve optimum utilization of professional talent -- for example, use of educational technicians and other paraprofessional personnel, changes in institutional and instructional arrangements, better use of resources;

6. strengthening of facilities and other resources of the public institutions of higher education in the state, enabling them to increase substantially their enrollment in the teacher education programs (even above the existing projections) to increase their faculties, and to adopt improved practices in utilization of physical facilities and of time;

7. more imaginative and extended use, by the schools and the institutions of higher education, of existing technological facilities (television, programmed instruction, computers), and very substantial expansion and interinstitutional pooling of such resources; and

8. active encouragement to private institutions of higher education to maintain and expand their programs of teacher education, including such public assistance of these efforts as may be appropriate and legal. (See Recommendation No. 5, Section C.)

Several of the foregoing suggestions appear in other sections of this report. They are repeated here by way of emphasis and because of their direct relevancy to teacher supply, as well as the improvement of teacher education programs as a whole.

Some General Observations. Because the Panel's projections of Connecticut's future needs for teachers and other school personnel are substantially higher than those already existing, and because these projections are so critical to future decisions concerning teacher education, we believe the following general observations are pertinent.

1. The present and prospective supply of qualified professional personnel to staff the nation's elementary and secondary schools is critically inadequate. Some shortages have been chronic and persistent over the past fifteen years; other areas of persistent shortages are appearing. The national situation with respect to

these shortages is already critical in some areas and is certain to become even more critical during the years over which our projections have been made.

2. Although existing teacher shortages are a function of many and diverse factors, one striking fact must be recognized -- the failure of many projections adequately to take into account new and potent forces contributing to the increase in personnel needs. As a result, too-low estimates themselves have contributed to widening the gap between supply and demand.

3. Despite efforts to change them, institutional arrangements and practices under which teachers are prepared and, in turn teach, remain largely conventional on most campuses and in most schools. Optimum utilization of time, talent, and technology still remains a challenge to be met successfully.

4. By and large, neither the several states in their public policies and actions with respect to teacher education, nor the organized profession have recognized adequately the economic, social, and political costs to society of failure when rising educational aspirations and needs are not met. This observation applies

particularly to public institutions of higher education upon which the state must place its principal reliance for teachers and other school personnel.

5. Under the methodology most frequently used in projecting enrollment and teacher needs, the statistics may be impeccable, but they also tend to be consistently low. The error lies not in the mathematical computation but, rather, in the assumptions made and the premises used. Unless these are modified to take into account the new kinds of pressures to which education is subject, many of which are of relatively recent emergence, we shall continue to underestimate our needs and, in turn, fail to meet our needs.

National experience, Connecticut's experience, and the Panel's collective experience clearly indicate the assumptions commonly used have been inadequate and eventually are misleading. Again, the Panel expresses its belief that the projections made are conservative and represent the minimums on which future planning, public policies, and public decisions concerning teacher education in Connecticut should be made.

* * * *

In Section B of this report, Teacher Education - An Urgent Matter, the Panel stated the principles which have guided the Connecticut Teacher Education Study and which undergird the report's recommendations. We conclude the report with a statement of two strongly held convictions.

First, if Connecticut, in its efforts to improve teacher education, sees improvement primarily as a function of more state financial support, of refinement of existing practices, or of improved administration, little significant change in teacher education will take place. Basic improvements in teacher education will not be found through endless commitment to limited refinements of what already exists.

Second, to achieve the kinds of improvement recommended in this report, Connecticut must have a will to embrace change, a readiness to experiment, and a belief in innovation as major avenues to improvement. There must be public policies which are hospitable to innovation and a professional attitude of determination to take maximum advantage of such policies.

Our experience during the course of this study supports the judgment that Connecticut is ready to make such changes in teacher education as have been recommended and that the time to do so is now.